CLAIMS

1. Deformed wire for reinforcing submarine optical fiber cable characterized by including, by wt%, C: more than 0.65% to 1.1%, Si: 0.15 to 1.5%, and Mn: 0.20 to 1.5% and further including one or two or more of Cr: 1.2% or less, where (Mn+Cr): 0.2 to 1.5%, Mo: 0.01 to 0.1%, V: 0.01 to 0.1%, Al: 0.002 to 0.1%, Ti: 0.002 to 0.1%, Nb: 0.001 to 0.3%, and B: 0.0005 to 0.1%, where a total of (Mo+V+Al+Ti+Nb+B) is 0.0005 to 0.5%, and a balance of Fe and unavoidable impurities, Ceq = C+1/4Si+1/5Mn+4/13Cr satisfying 0.80% ≤ Ceq ≤ 1.80%, being a ferrite-pearlite structure or pearlite structure, having a number of shear bands cutting across an L-section center axial line (shear bands having inclination with respect to rolling direction) of 20/mm per unit length of the center axis, having an angle formed by the center axis and shear bands in the range of 10 to 90°, having a tensile strength of 1800 MPa or more, having a sectional area forming an approximately fan shape, a plurality of the approximately fan shapes being combined to form a circular hollow cross-section for accommodating optical fibers, having at its surface a pebbled surface comprised of relief shapes of depths of 0.2 to 5 μm, and having a weld at least at one location in the longitudinal direction.

2. Deformed wire for reinforcing submarine optical fiber cable characterized by including, by wt%, C: more than 0.65% to 1.1%, Si: 0.15 to 1.5%, and Mn: 0.20 to 1.5% and further including one or two or more of Cr: 1.2% or less, where (Mn+Cr): 0.2 to 1.5%, Mo: 0.01 to 0.1%, V: 0.01 to 0.1%, Al: 0.002 to 0.1%, Ti: 0.002 to 0.1%, Nb: 0.001 to 0.3%, and B: 0.0005 to 0.1%, where a total of (Mo+V+Al+Ti+Nb+B) is 0.0005 to 0.5%, and a balance of Fe and unavoidable impurities, Ceq = C+1/4Si+1/5Mn+4/13Cr satisfying 0.80% ≤ Ceq ≤ 1.80%, being a ferrite-pearlite structure or pearlite structure, by having Si segregated so as to satisfy a Si maximum segregation degree of the

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cementite/ferrite interface in the range of 30 nm to the ferrite phase side from the cementite and ferrite interface of the pearlite structure (maximum Si concentration/Si content of bulk in range of 30 nm to ferrite phase side from cementite and ferrite interface) ≥ 1.1, having a number of shear bands cutting across an L-section center axial line (shear bands having inclination with respect to rolling direction) of 20/mm per unit length of the center axis, having an angle formed by the center axis and shear bands in the range of 10 to 90°, having a tensile strength of 1800 MPa or more, having a sectional area forming an approximately fan shape, a plurality of the approximately fan shapes being combined to form a circular hollow cross-section for accommodating optical fibers, having at its surface a pebbled surface comprised of relief shapes of depths of 0.2 to 5 μm, and having a weld at least at one location in the longitudinal direction.

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